

Subject card

Subject name and code	An introduction to mathematics, PG_00143528						
Field of study	Informatics						
Date of commencement of studies	October 2025		Academic year of realisation of subject		2025/2026		
Education level	Bachelor's studies		Subject group		Obligatory subject group in the field of study		
Mode of study	full-time studies		Mode of delivery		at the university		
Year of study	1		Language of instruction		Polish		
Semester of study	1		ECTS credits		5.0		
Learning profile	academic		Assessment form				
Conducting unit							
Name and surname of lecturer (lecturers)	Subject supervisor		dr hab. Jerzy Topp				
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	30.0	30.0	0.0	0.0	0.0	60
	E-learning hours included: 0.0						
Learning activity and number of study hours	Learning activity	Participation in didactic classes included in study plan		Participation in consultation hours		Self-study	SUM
	Number of study hours	60		0.0		65.0	125
Subject objectives	non applicable						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	[INFL3_U03] can design and analyze algorithms for their correctness and computational complexity using appropriate algorithmic techniques and data structures		design and analyze algorithms in terms of their correctness and computational complexity, using the language of set theory, relations and inductive reasoning		[SU1] oral statement/conversation/discussion [SU4] test/exam - oral or written [SU8] observation of student's independent or team work		
	[INFL3_W02] has knowledge of discrete mathematics and probabilistic methods and statistics		The student has knowledge of the basic concepts of propositional calculus, set theory, describes the basic properties of the set of natural numbers, functions and relations		[SW4] test/exam - oral or written		
	[INFL3_U01] can apply mathematical knowledge to formulate, analyze and solve problems related to computer science		After completing the Introduction to Mathematics course, a student is able to: apply mathematical knowledge (the language of logic and set theory, properties of functions, inductive reasoning, properties of relations) to formulate, analyze and solve problems related to computer science		[SU1] oral statement/conversation/discussion [SU4] test/exam - oral or written [SU8] observation of student's independent or team work		
	[INFL3_U02] can precisely formulate questions to deepen one's understanding of a given topic or find missing elements of reasoning		precisely formulate questions to deepen your understanding of the basics of mathematics and their connections with the basics of computer science; can conduct and analyze evidence and find missing elements of reasoning		[SU1] oral statement/conversation/discussion [SU4] test/exam - oral or written [SU8] observation of student's independent or team work		
Subject contents	non applicable						

Prerequisites and co-requisites	Knowledge of mathematics at secondary school level.		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	homework and tests	51.0%	50.0%
	exam	51.0%	50.0%
Recommended reading	Basic literature	1. J. Topp, Wstęp do matematyki, Wydawnictwo Uniwersytetu Gdańskiego, Gdańsk 2015. 2. W. Guzicki, P. Zakrzewski, Wykłady ze wstępu do matematyki. Wprowadzenie do teorii mnogości, WN PWN, Warszawa 2005. 3. W. Guzicki, P. Zakrzewski, Wstęp do matematyki. Zbiór zadań, WN PWN, Warszawa 2005. 4. J. Kraszewski, Wstęp do matematyki, WNT, Warszawa 2007. 5. H. Rasiowa, Wstęp do matematyki współczesnej, WN PWN, Warszawa 2004.	
	Supplementary literature	non applicable	
	eResources addresses	Adresy na platformie eNauczanie:	
Example issues/ example questions/ tasks being completed			
Work placement	Not applicable		

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